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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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SUBSCRIPTIONS TO THE R.C.V.S.

Voluntary subscriptions continue to flow in steadily; and it may now be hoped that this year's total will considerably exceed that of last year. At this period last year some £665 had been received; and at the end of the year the total amount, excluding some subscriptions for 1917 paid in advance, fell only just short of £850. This year the amount received has already reached £800; and, as more than five months still remain for further subscription, the situation has possibilities. Almost certainly we shall reach £1000 before the year ends, and we may get well over that figure. The financial responsibilities are heavier now than last year; and at present the only means of meeting them is by voluntary subscription.

PROFESSIONAL DISCUSSION.

In a paper in another column, Mr. Dunlop refers to the question of Magnesium sulphate in bovine practice, which Mr. Davis raised in this journal some time back, and which received then much less notice than it deserved. We share Mr. Dunlop's regret that the subject was so inadequately discussed at the time; but veterinary history affords many similar examples of the reluctance of practitioners to publish their clinical experience and views. Mr. Dunlop himself reminds us of one such example in another part of his paper, where he alludes to the old days of bleeding. One professional journal—the old *Veterinarian*—was in existence and enjoyed a wide circulation throughout the period during which bleeding was dethroned from its old supremacy in veterinary practice; but its pages contain hardly any evidence as to how, or by whose agency, that veritable revolution was effected. Somehow the profession generally lost faith in bleeding—that is really all we know about it—but we do know that many of our members still held to it long after it had dropped out of human practice, and probably the all but complete absence of any discussion of the subject in the veterinary press explains why they did so. The profession failed to utilise its press; and many of its members fell behind the times in consequence.

A somewhat similar revolution may already have silently made considerable progress in the more limited field of bovine practice as regards the use of magnesium sulphate. Probably many practitioners to-day would accord it nothing like its old place in cattle practice; but very few of them have said so. Mr. Davis made one attempt to ascertain the views of the profession regarding it, and failed. Mr. Dunlop, in re-opening the question, and quoting Mr. Davis' utterances in doing so, is evidently deliberately making a second attempt in the same direction; it is to be hoped that he may be successful.

OCCLUSION OF THE CONJUNCTIVAL SACS AND THE PALPEBRAL FISSURE AFTER EXCISION OF EYEBALL.

By HENRY GRAY, M.R.C.V.S., Kensington, W. 8.

Some years ago I instituted an operation for doing away with the unsightly eye-socket after removal of the eyeball following an irreparable injury, and have since performed it on many occasions with absolute success. As my experience of it has matured, and not having heard of anybody who has yet performed or recorded as having performed it, I think it is worthy of being brought to the notice of the profession.

Having removed the eyeball together with the whole of the conjunctival membrane, the membrana nictitans and the lacrimal gland, the eye cavity is packed with aseptic gauze saturated with a sterilised solution of chinosol, the eyelids are sutured together. Twenty-four hours later the sutures are divided and the packing removed. The packing and suturing are renewed every two days for a week, when the eye socket will be found to be fairly well filled up with healthy granulation tissue. The whole length of the free margins of the eyelids, formed partly by skin and mucous membrane, is then removed with a a pair of sharp, fine-pointed scissors, and the raw edges of the eyelids are brought together by several sutures of fine Japanese silk, which are maintained in position until the whole breadth of the palpebral fissure is occluded by the cohesion of the eyelids, which will be generally accomplished in the course of a week if no suppuration has occurred to prevent it, which is rarely the case if the wound has been treated antiseptically from the commencement. Beyond painting the outside surface of the eyelids immediately after the suturing has been performed no further dressing is required. On no account should the wound be bathed with lotions, which only macerate the tissues and retard cicatrisation. After the eyelids have become firmly adherent, or rather coherent, the sutures may be removed.

This operation does away with the unsightly appearance of the eye-socket, which only forms a receptacle for dust and foreign bodies which give rise to a flow of muco-purulent secretion, to soil the skin surrounding the ocular region. I have carried it out on the horse, dog, cat, and parrot, and it has always given satisfaction to those owners on whose animals I have performed it.

After a time the hair re-grows and covers the region on which the operation was performed. At most there remains only a sinking in of the skin. which can be raised if one desires to do so by the subcutaneous injection of sterilised paraffin wax.

For the complete success of the operation the whole of the conjunctival mucous membrane and of the free margins of the eyelids and also the lacrimal gland and membrana nictitans must be removed.

Symptomatology of Epizootic lymphangitis.

H. Velu reports on the study of 300 cases, in the *Bull. Soc. Cent. Med. Vet.*, March 1, 1917:—

"'Epizootic lymphangitis is at present considered to be a disease of the lymphatics and mucous membranes, characterised always and exclusively by the presence of buds and cording of the lymphatics.' This, however, does not correspond with the author's experience and he thus classifies the disease into two varieties, *viz.*, (1) an atypical lymphangitis which remains localised in the inoculation wound, and (2) a typical lymphangitis which is manifested by cutaneous lesions (cording and buds) and sometimes by ulcers on the mucous membranes.

Atypical lymphangitis. The most striking characters of the lesions are, resistance to cicatrisation and the formation of fistulæ without apparent cause. Very often the original fistula formed becomes constricted and small buds appear around it which later discharge and give rise to new fistulæ often communicating with the original one. One finds on examination of these fistulæ that they terminate in serious lesions—necrosis of bone, ligaments, or connective tissue—which account for their persistence and the abundant suppuration. The nature of this variety of the disease has hitherto been overlooked by practitioners as, owing to the favourable results following surgical operation, the lesions were supposed to be due to ordinary causes. Microscopic examination, however, invariably reveals the true nature of the disease and enables one to employ a specific treatment.

The various forms of this atypical lymphangitis observed by the author were as follows:—(*a*) simple shallow ulcers, of frequent occurrence, and (*b*) simple fistulous wounds, both occurring as complications of ordinary wounds; (*c*) a testicular lesion, as observed by Teppaz in the course of typical lymphangitis, was observed by the author in five cases of this atypical kind; (*d*) osseous lesions, observed 17 times; (*e*) conjunctival ulcers, observed in six cases, bi-lateral, and resembling summer sores in appearance; (*f*) cryptococcic phlebitis (one case); (*g*) cutaneous form (two cases) resembling contagious pustular dermatitis in appearance; these cases were characterised by the appearance of a small number of buds disseminated over the body and limbs and not united by visible lymphatic vessels.

Typical lymphangitis. In this form the resistance of the tissues apparently becomes broken down and invasion of the lymphatic vessels takes place from the original wound after an interval, which may vary from a fortnight to six months according to the author's observations. This form is generally cutaneous, but it often affects the mucous membranes as a complication, following generalisation, or auto-inoculation.

The cutaneous form may be observed anywhere on the body and the course of the disease is always the same. From the original cicatrised or uncicatrised wound very prominent cords are seen along the lymphatic vessels making their way towards the nearest superficial lymphatic gland. Small intradermic swellings of variable size appear along their course giving them a beaded appearance. These swellings become extremely sensitive and the pain often causes great alteration in the temperament of the animal. The swellings after a very variable interval become converted into small abscesses and burst, the smallest discharging a greyish-red liquid which is sticky and can be easily spread out, and the largest abscesses discharging a laudable pus which is of a creamy, thick, mucous appearance, is not sticky, and is spread out with difficulty. The very large deep-seated abscesses give rise to a less homogeneous, more serous-looking, pus.

After puncture the pus changes in character and each bud becomes an irregularly shaped protruding ulcer showing no tendency to cicatrisation and oozing a clear liquid from its surface. The inflammation of the lymphatic vessels disappears eventually leaving only the ulcerated buds and sometimes complications in the lymphatic glands, which may attain a considerable size, suppurate and become perforated with fistulæ, discharging a pus extremely rich in cryptococci,

Lesions on the mucous membranes.—These most often appear as final complications in cases of generalised lymphangitis and according to the seats affected they assume very varied characters. On the lips and on the external wings of the nostril one finds small papules which may be taken for horse pox papules. After a few days these papules become transformed into pustules and ulcerate, small raised umbilicated ulcers remaining which discharge a colourless oily liquid. From the internal canthus of the eye a chain of small ulcers was observed in some cases to run up and down the head giving an appearance very similar to that of summer sores. On the conjunctiva, pituitary mucous membrane, and borders of the lips are sometimes seen ulcers which may, at first sight, be mistaken for those of acute glanders. The ulcer, however, is different in that its base protrudes and forms a prominence from 1 to 2 mm. in thickness on the mucous membrane. The ulcer is surrounded by a lightly coloured zone and it shows no tendency to cicatrisation. The ulcers sometimes become confluent and then give rise to a dull-white granulating mass. This condition leads to a painful swelling, and sometimec suppuration, of the submaxillary gland.—*Tropical Veterinary Bulletin.*

The etiology of worm nests in cattle.

Further investigations by J. B. Cleland, S. Dodd, and E. W. Ferguson are published by the Commonwealth of Australia. "The experimental work was carried out at Milson Island, N.S.W., where conditions appeared favourable for work on account of the natural infestation with worm nests of the herd of cattle kept on the Island. From previous experiments carried out in this locality it seemed very clearly indicated that the vector was a flying insect, and that it probably was either *Stomoxys calcitrans* or one or more species of mosquito or of tabanids. The preponderance of evidence seemed

to be in favour of stomoxys and special attention was thus directed to this insect."

A series of experiments with stomoxys, and simultaneously with mosquitos—mostly of the Culicidæ—are detailed, but were negative.

"Experiments to test the life of the larvæ from worm nests placed in cow dung showed that they were not capable of surviving for 24 hours. Owing to the short life of the larva outside the body and also in view of the fact that no permanent natural water existed on the island it seems improbable that a water or moisture-dwelling invertebrate is the intermediate host."

"In connection with the possible transmission by biting insects or other invertebrates the incidence and description of a long series of flies are enumerated.

"The source through which *Onchocerca gibsoni* was introduced into Australia has previously been discussed by Cleland and Harvey Johnston, who suggested that it had been introduced with buffaloes into the Northern Territory of Australia, and Gilruth and Sweet, who considered that it had been introduced by means of ordinary cattle from Java or some other of the Malay Islands. The authors now state that 'a further consideration of the sources from which cattle were imported into Australia in the early days of settlement, together with greater detail as to the distribution of worm nests in cattle in New South Wales, has made us reconsider both these possibilities and we have now come to the conclusion that it is by no mean improbable that *Onchocerca gibsoni* reached Australia amongst the early importation of cattle from India into the neighbourhood of Sydney and from this source spread northwards with the distribution of cattle.'

"With regard to the probable vector the authors conclude that it is unlikely to be Stomoxys or mosquitoes but that it is probably some tabanid ; the distribution of onchocerciasis seems to correspond with the prevalence of tabanids."—*Tropical Veterinary Bulletin.*

ABSTRACTS FROM FOREIGN JOURNALS.

Magnesium Sulphate in treatment of Tetanus.

Many veterinarians and medical men have already testified to the powerful influence which aqueous solutions of magnesium sulphate, employed as intravenous, intra-muscular, hypodermic, and intra-spinal injections, exercise in the treatment of tetanus. F. Romero Hernández, a Spanish veterinary Surgeon, has recorded the following successful case.

The subject was a mare, five years old and in a good state of nutrition, affected with an attack of tetanus of very rapid and acute course. Among the symptoms the author mentions trismus, pleurosthotonos, rectification of the dorso-lumbar line, nystagmus, dyspnea, intense fever, and rapid loss of condition. Treatment with hypodermic injections of magnesium sulphate was decided upon; though, in view of the gravity of the symptoms, very slight hopes of success were entertained.

The treatment lasted twenty-two days. At first, injections of camporated oil were given with the object of re-inforcing the heart; and these were alternated, for the first four days, with a daily hypodermic injection of 30 c.c. of a 20% aqueous solution of magnesium sulphate. No improvement resulted; and the animal managed to take only watery and green food with great difficulty. After the fourth day the dose was augmented to 40 c.c. of a 50% solution of magnesium sulphate; and the effects of this were manifested the next day by a tendency to the disappearance of the trismus and tetanic contractions and to reduction of the temperature.

This second stage of the treatment lasted three days. The author then resorted to a dose of 40 c.c. of a solution of *maximum* concentration of magnesium sulphate in boiled water cold. This dose was given for ten consecutive days; and the results "could not have been better." For the remainder of the time until recovery the doses were given on alternate days, or every three days. Along with this treatment, the wounds were subjected to antiseptic and aseptic measures. — (*Revista de Higiene y Sanidad Veterinaria*).

Lameness as a Diagnostic Sign in the Subcutaneous Mallein Test.

Fayet has made an interesting communication upon this subject to the Central Society of Veterinary Medicine. He says that the local reaction following the subcutaneous injection of mallein is frequently accompanied by difficulty in the movements of the limb of the side corresponding to the swelling. This symptom, in his view, has not received the attention it deserves from veterinarans. The difficulty is especially manifested in the extension of the limb; the scapular region is immobilised when the limb is moved, and the weight is thrown almost entirely upon the opposite limb. These manifestations are not so apparent and complete unless the local reaction is very intense. In a case of slight reaction the lameness is only perceived as the horse leaves the stable, lessens when a few steps are taken, and becomes imperceptible at the trot.

This lameness is a small secondary sign of the reaction to mallein, which should not be forgotten. It follows that the mallein should be injected towards the inferior third of the neck, and that, before giving the injection, the horse should be tested to establish the non-existence of lameness.—(*Revista de Veterinaria Militar*). W. R. C.

Royal College of Veterinary Surgeons.

EXAMINATIONS IN LONDON.

At a meeting of the Board of Examiners, held in London on July 9th, 1917, for the Written, and on July 10th for the Oral and Practical Examinations, the following gentlemen passed their Final Examination:—

Mr. T. F. Arnold
P. W. Bloye
R. B. Crichton
J. S. Garewal
J. W. Knowles
T. L. Lewis
K. A. Miles
Mr. C. S. Northcott
L. P. Pugh
E. A. Rucker
F. C. Scott *
E. Wallace
J. H. M. White

The following passed their Third Examination:

Mr. H. R. Allen
G. Barnett *
R. W. Down
C. W. Heane
F. H. Jones
Mr. D. E. MacRae
J. McCunn *
B. Sayer
W. A. Williams

The following passed their Second Examination:

Mr. A. Bakar
W. J. Leyshon
J. S. Margarson
Mr. P. Matthews
J. R. Pratt *

The following passed their First Examination:

Mr. A. S. Canham
H. L. Hobson
C. R. A. Powell
Mr. J. E. Thomas
C. N. Thompson
R. W. A. Watchorn †

EXAMINATIONS IN LIVERPOOL.

The following passed their Final Examination;

Mr. J. J. M. Barry
R. Gorman
E. A. Pearce
Mr. E. P. Shallcross
T. A. Elam
J. B. Garside

EXAMINATIONS IN EDINBURGH.

The following passed their Final Examination:

Mr. R. E. Bond
F. Christopher
T. Grahame
A. F. Lamont
Mr. W. S. Petrie *
J. P. Rice
H. M. Roemmele

The following passed their First Examination:

Mr. R. L. Creery
H. F. Downie
J. Judge
Mr. J. K. Irvine
J. McAllan, M.A. *
J. R. Rider *

The following passed their Second Examination:

Mr. J. Davies
A. B. Hendry
W. C. Miller
Mr. G. B. Purvis
E. J. H. Sewell

The following passed their First Examination

Mr. A. K. Cameron
N. M. Clayton
R. Dunwoody *
Mr. A. M. Graham
W. A. R. Ogilvie

EXAMINATIONS IN DUBLIN.

The following Students were successful in the recent Examinations at the R.C.V.I., Dublin.

The following passed their Final Examination;

Mr. S. Conway
S. R. J. Cussen
T. J. Eastwood
A. Hayman
J. G. Hoban
T. Hodgins
Mr. H. C. I. Kelly
G. McElligott
R. W. M. Mettam *
H. O'Neill
A. P. Preston
W. L. Sinton

The following passed their Third Examination:

Mr. S. Anderson
C. A. Ewing
T. Fitzpatrick
J. Heffernan
T. J. Hurley
T. Kelleher *
Mr. J. A. McCutcheon
B. S. Parkin *
W. L. Smyth
D. P. White
W. F. White

The following passed their Second Examination.

Mr. R. J. Condy
M. N. Conway
D. J. Donelly
P. J. J. Fourie
M. W. Henning
W. G. Jones *
Mr. M. J. McGing
P. C. McGowan
A. McLean
J. Masterson
M. F. Murphy
C. P. Neser *

The following passed their First Examination:

Mr. W. Anderson
P. V. Byrne
D. D. Colbert
W. G. Emerson
S. A. Evans *
Mr. A. A. Hamilton *
J. Murphy
J. P. Nowlan *
J. O'Keeffe
T. Timony †

The following passed the Examination in Stable Management:

Mr. D. Brophy
T. F. Moran
J. J. O'Donovan †
Mr. G. West *
W. White †

The following passed the Examination in Junior Anatonomy:

R. J. Nolan *

Marked thus † passed with First Class Honours.
Marked thus * passed with Second Class Honours.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1917 :—

J. L. Barling, Hereford	£1	1	0
T. A. Blake, Capt. N.Z.V.C.	1	1	0
J. C. Deville, Ottoxeter	1	1	0
B. Gorton, Ilford	1	1	0
W. A. Jelbart, Major A.V.C.	1	1	0
R. H. Knowles, Capt. A.V.C.	1	1	0
H. M. Lenox-Conyngham, Major A.V.C.	1	1	0
D. Macdonald, Major A.V.C.	1	1	0
H. V. M. Metivier, Capt. A.V.C.	1	1	0
S. H. Nye, Loughton	1	1	0
H. H. Roberts, Leatherhead	1	1	0
Previously acknowledged	790	5	0
	£801	16	0

THE VETERINARY MEDICAL ASSOCIATION OF IRELAND.

(National V.M.A.—Irish Branch).

EPSOM SALTS IN CATTLE DISEASES.

An address by Mr. J. B. Dunlop, M.R.C.V.S., given at the meeting in Dublin, on November 11th, 1916.

[The reporter's notes of the business of the Association and the discussion on the paper have gone astray.]

President and Gentlemen,—I have been asked to bring before you for discussion some subject that might be of some interest to this Association. I have much pleasure in acceding to the request. I esteem it an honour to be invited to select the subject, and the honour is enhanced by the fact that I ceased long ago to be an active member of the profession.

Although I have had considerable experience as a clinician, that experience was restricted to a comparatively short period, and I fear my ideas may be rather out of date. However, it is satisfactory to know that there are gentlemen here to night whose practice has been extensive and has extended over a lengthened period, who still have the honour to be actively engaged in alleviating pain, saving valuable property, and indirectly saving the lives of their fellow creatures. That being so I shall have little more to do than to introduce the subject. The expressed opinions and theories of our younger members will be much appreciated. They have had a much better education and practical training than we older members received. In my student days bacteriology was unknown.

It has often been said that more people have been killed by the lancet than by the lance. About 70 years ago, after the horrible practice of blood-letting had been constantly in use for ages, a number of members of the medical profession who dared to think for themselves, and who refused to be trammelled by tradition, abandoned the use of the lancet altogether. They noted results and made their reports, and the practice soon came to an end.

The end of blood-letting in animals, however, did not come so suddenly. Few of the present generation can realise the difficulties the older members of our profession had to contend with before they succeeded in abolishing the indiscriminate abstraction of the vital fluid. They had to exercise the greatest tact and patience, or alternatively accept a dissatisfied and dwindling *clientèle*.

There is a crying evil which, I believe, has prevailed for centuries, which is still in vogue, and which I would like particularly to bring under your notice this evening—that is, the indiscriminate use of Epsom salts, which, up to a recent date, has been very common. I admit that many medical authorities still consider it an excellent purgative, and I have no doubt that it is—when given under special circumstances and on medical advice. As now used indiscriminately in country places I am convinced that it saves a considerable proportion of the population from dying of old age. In any case it is a mistake to suppose that any medicine which may be beneficial to man should, in like circumstance, be equally suitable for diseases of our domesticated animals. I am convinced that Mag. sulph. as commonly administered to cattle, as an aperient for indigestion, constipation, or impaction, is a poison, more especially when there is a tendency to fermentation of stomach contents. I know that when given in one small dose in one or two obscure specific or dietetic diseases it is a veritable poison.

I have reason to believe that many experienced veterinary surgeons have discontinued the use of Mag. sulph. for cattle. Shortly after I left college I abandoned its use as an aperient. I know it is still the sheet anchor of the empiric.

I have a great respect for the medical faculty. Numerically we are an insignificant body, but that is no reason why we should not strike out lines for ourselves as, indeed, we have done in the past with conspicuous success in the stamping out, and in the treatment of diseases. All I ask you to do is to approach this subject with an open mind, disregard tradition, take notes and compare results, as some leading men in the medical profession did with reference to the insane practice of indiscriminate blood-letting.

Motor cars are being made more efficient and more reliable every year, and are likely to come more and more into use; fewer horses will be kept in the cities, and our members will have to give increased attention to farm stock. Motor cars, however, are not an unmixed evil. They enable practitioners to cover long distances in a short space of time, and therefore bovine practice will come to be more remunerative. This is one reason why I thought the present an opportune time to bring before you a subject bearing on the more common diseases of cattle.

A concise, interesting and important article on Epsom salts, by Mr. Davis, appeared recently in *The Veterinary Record*. Notwithstanding some pointed remarks by the editor, only one letter appeared in *The Record* expressing agreement with Mr. Davis. I was rather disappointed at this, and I did not think that such an important matter should be allowed to remain unheeded and forgotten, and I am bringing it before this Association with a view to have it fully discussed. Mr. Davis puts his facts and opinions so nicely that I cannot do better than quote his words, which are as follows:—

"The common practice of administering to cattle pound doses of Epsom salts (or the equivalent in the shape of somebody's coloured drench) is, to my mind, fraught with great danger to the animals, and is, I am convinced, responsible for innumerable deaths among cows every year. I arrived at this conclusion a very long time ago, and ceased to employ mag. sulph. as an aperient for cows.

Scarcely a month passes but I get confirmation of this opinion. A cow goes off her feed, or picks just a little, ceases to ruminate, gives less than half her usual quantity of milk, and passes little fæces, or perhaps none—she is said to have caught a chill, she receives a pound of salts, or a packet of Cerulean drench (coloured salts). Next day she is no better and the dose is repeated. On the following day one of two things happens. The medicine acts as an aperient and the cow recovers, or (and this is a frequent sequence) she is still found to be very ill. She rises with difficulty, there is trembling of the skin covering the hind parts, the eyes are retracted, eyelids partly closed, tears run over the face, a grunt accompanies each respiration: the brain is implicated—a condition of partial coma or of excitement is observed, and that night or the following day the patient is dead.

Post-mortem. An impacted rumen and violent inflammation of that viscus.

Several clients of mine, owners of large herds of dairy cows, to whom I have pointed out this danger, though at first sceptical as to the validity of my conclusion (since they, and perhaps their fathers before them, had for years used this remedy), are now firmly convinced of its truth, and never employ salts as an aperient for cows. Quite recently a very large dairy farmer said to me, 'Since I have stopped using salts we never seem to get any of those cases where a cow with stoppage goes off her head and knocks about, or gets sleepy like a cow with drop.' It seems likely that large doses of Sulphate of magnesia poison by a local irritation of the mucous membrane of the stomach, and, after absorption, by paralysing the nervous system. I never go to a case of milk fever where salts have been given as calving drink but I know I am in for trouble. A not uncommon result is an apparent recovery in six or eight hours, and pneumonia and death a few days after."

I am not quite sure if Mr. Davis is right in saying that pneumonia often follows the administration of sulphate of magnesia. This may be so when large doses are administered. I know that in the hands of the amateur, drenches often pass down the trachea and the results are disastrous. The poor brute which cannot make a complaint is the victim; the owner and the country are the losers. It is surprising how tolerant the bronchi are to substances—turpentine for instance—which are rapidly fatal to small organisms. The bronchi, unlike the stomach, are very absorbent, and fluids such as turpentine either quickly evaporate or become absorbed and diffused through the body, and their local effects are transient. This is not so, however, with Epsom salts or carminatives generally, which are slowly absorbed and their effects are more persistent.

It would be out of place to refer to treatment of the more common ailments of cattle, such as impaction and constipation, but perhaps I should say that as a purgative or a laxative I always prefer Sodii sulphas. Mag-

nesii sulphas is proverbially "windy," and the ox with his complex organs of digestion is peculiarly liable to tympany. It is different with the horse. Mag. sulph. in small doses passes rapidly through the small stomach of the horse, is quickly absorbed, passes off by the kidney and acts as an excellent eliminative.

I do not suggest that Epsom salts as a medicine for cattle should be removed altogether from our pharmacies. I disapprove of it as given to cattle in the usual substantial doses, and would not use it at all in certain ailments. I am of opinion that it has considerable value in some cases as an eliminative when combined with other suitable salines. It appears to increase excretion generally, but in fairly large doses it seems to diminish all the secretions. It appears to diminish the quantity of mucin secreted, or excreted, as the case may be, and to reduce the viscosity of mucus, so that it is more readily removed from the surface of the membranes. Healthy or normal mucus is a wonderful fluid. It entangles, envelopes and paralyses micro-organisms. It is a necessary protection and lubricant to all mucous membranes. When mucus is abnormally thin, bacteria penetrate the lining membranes of the viscera more readily, and without the interposition of the viscid film ordinary ingesta act as an irritant. It is easy, therefore, to understand why mag. sulph. acts injuriously when given in what might be termed effective doses.

Curiously enough, when cold is applied to the surface of the body it has effects somewhat similar to the administration of Epsom salts. For example when the loins are unduly exposed to cold it is not very unusual for the bacteria always present in the intestines to penetrate the membranes and invade the kidneys. The first effect of cold is to dry up the contiguous mucous membranes and to lower their vitality, so that it is as if the bacteria had received a roving commission to leave their natural habitat, where they are useful, and make a raid on any of the organs in the vicinity which might happen to be debilitated for the time being. The study of the effects of cold as applied to various parts of the bodies of man and animals is, I think, most interesting.

We know that digestion is largely under the influence of the nervous system, and we know that fermentation of the contents of the rumen rapidly ensues after "choking." That is believed to be due to reflex action on the fibres of the vagus which lead to the rumen. If, as we are told, there is no gastric or bactericidal fluid secreted in the first three stomachs, that their function is merely to macerate, and that digestion in them is due to the presence of ferments and enzymes in the food, why should tympanitis set in so suddenly after "choking?" I can assure you it is not due to the absence of vigorous churning movements in the rumen. I may incidentally mention that many cows are destroyed by the use of the probang in "choking," and it should be used as seldom as possible.

It is known that rumination ceases when the supply of fluid is cut off. It has been said that this explains the "necessity of enormous salivary secretion" in ruminants. This is an additional reason why no medicine calculated to arrest salivary secretion should be employed.

I have said little with reference to the positive treatment of the more common diseases of cattle, but I know I can safely leave that matter in your hands.

Needless to say the medical profession has long been engaged in a great and beneficent work in the cause of humanity. It condemns, as far as possible, the habitual use of laxatives, but it has the "quack" to contend with, who is able to spend enormous sums in advertisements. If the medical faculty is engaged in this good work surely it is up to us to be engaged in the further saving of valuable property, and so benefit humanity by increasing the supply of foods which are essential to the health and well being of the people.

Mr. DUNLOP, in reply, said: I am quite in agreement with all the speakers who eulogise the use of Epsom salts for horses, especially when put into a bucket of water and placed before the animal at a medium level. I never drench a horse in cases of pneumonia, pleurisy or influenza, and I might say the same with regard to colic and enteritis, but I wish to emphasise the fact that the paper has reference to cattle and their common ailments. When I mentioned that Epsom salts was, in some diseases of cattle, a veritable poison, I had in my mind an obscure dietetic or blood disease, which in some districts prevails in cattle when there is excess of rain and deficient sunshine. The symptoms are not very definite; the animal has no desire for food or drink, the pulse is normal and temperature subnormal; the animal is listless and a very slight twitching of the muscles may be observed at the triceps. It is rather curious that this disease is rarely or never seen in seasons when "grass staggers" is prevalent in horses.

In cases of choking I daresay the usual gases are prevented from passing upwards, while at the same time the cow is unable to swallow the salivary secretions which are essential to digestion.

I know that a good deal of harm is often done by passing the probang. Much force should never be applied. An oblong rectangular piece of turnip may be forced crosswise in the œsophagus and thus cause rupture, which is usually fatal. In such cases the animal may be relieved at once by introducing the trocar. The trocar and cannula should never be employed until a small incision is first made through the skin by the scalpel or penknife. When the trocar has been properly secured the cow appears comfortable, and the piece of turnip soon becomes dissolved by the saliva. It is often said that in cases of tympany fermentation does not take place in the rumen. Be that as it may, speedy relief is often afforded by giving disinfectants or antiseptics. I have seen marked benefit follow the administration of the old-fashioned remedy—an egg-shell full of tar, and there is little doubt that the tar passes directly into the rumen. I have seen cases of acute tympany, due to forced feeding of dairy cows on grains, bran, hay, etc., when it was necessary, after making a small opening in the rumen, to keep the opening clear by the continual use of an extemporised piece of hooked wire, and the fermentation of the contents as they were being removed was plainly visible.

I remember Prof. Dick, in 1858, recommending the combination of common salt with a purgative, for cattle. It not only increases the action of the purgative, but it induces the animal to drink. Without fluid digestion in the ox entirely ceases.

I need not tell gentlemen of your experienc that there is a knack in drenching cattle, that the head should not be over-elevated, and that salt especially should be carefully drenched. In some diseases of cattle salt is curative; notably so in red-water. We should, however, bear in mind that it has been experimentally proven over and over, that cattle and some other animals thrive better without it. There are few subjects more interesting than the study of the effects of salt and other salines on man and animals. Probably human beings use far too much salt as a condiment. A mild flavouring, I think, is all that is required. Probably it has some tendency to cause scurvy, warts and tumours, and it also tends to roughen the skin prematurely. Some salines have the opposite effect. Some salines are prone to induce hæmorrhages of the mucosa. A few grains of Epsom salts to a gallon of water, to be used for culinary purposes, is an effective preventive of lead poisoning where certain household water supply passes through leaden pipes. The habitual use of these salts in sensible proportions is injurious.

I cannot quite agree with those who advocate the indiscriminate use of nux vomica in combination with aperients. In many cases the viscera are congested, or may be they require a rest. It is often advantageous in such cases to give a gentle, non-irritating aperient—one likely to act on the alimentary canal generally, and the animal should have plenty of fluid—a little and often.

It is difficult at all times to prevent the attendant from forcing gruel, etc., down the cow's throat. The results of such a practice are often disastrous. The hardest job you ever give an attendant is to ask him to do nothing.

Gentlemen, the kind reception which you have given to the paper—a very common-place one—is much appreciated.

VICTORIA VETERINARY BENEVOLENT FUND.

A meeting of the Council was held at 10 Red Lion Square, London, W.C., on Thursday, July 5th, when the following were in attendance:—Mr. S. H. Slocock, in the Chair; Messrs. N. Almond, G. A. Banham, W. F. Barrett, F. W. Garnett, P. J. Howard, H. A. MacCormack, A. E. Mettam, W. J. Mulvey, T. S. Price, Sir S. Stockman, H. Sumner, R. C. Trigger, E. A. West, and the Hon. Secretaries, Messrs. P. J. L. Kelland and F. Bullock.

The minutes of the previous meeting having been published, were taken as read, and confirmed.

Apologies for absence were received from Maj. W. S. Mulvey, Prof. Dewar, Mr. F. L. Gooch, Maj. Abson, Maj. Hobday.

Appointment of President and Vice-Presidents. Mr. S. H. Slocock was unanimously re-elected President, and the following were elected Vice-Presidents: Messrs. J. Dunstan, T. S. Price, H. Sumner, and E. A. West.

Correspondence. A letter was read from Mrs. Shipley thanking the Council for the vote of condolence on the death of her late husband.

A letter, dated 27th April, was received from the Secretary R.C.V.S. stating that no objection would be raised to letters being addressed to 10 Red Lion Square on the business of the Fund.

Secretaries' Report. The Hon. Secretaries reported that since the previous quarterly meeting the following new subscriptions had been received:—

T. B. Arnald	£1	1	0
N. Bissett, Lieut. A.V.C.	1	1	0
J. B. Buxton	1	1	0
D. C. Greene, Capt. A.V.C.	5	5	0
J. S. Keane, Lieut. A.V.C.	1	0	0
W. M. Mitchell, Capt. A.V.C.	1	1	0
A. Over	1	1	0
S. L. Slocock, Capt. A.V.C.	1	1	0
Mrs. W. K. Stewart		10	0
P. T. Saunders, Capt. A.V.C.		10	6

Members who have increased their subscriptions:—

W. C. B. Revill, Capt. A.V.C.	incd. to	£1	1	0
A. Spicer	,,	2	2	0
J. Temple	,,	3	3	0
H. Mason (as from 1918)	,,	2	2	0
D. A. E. Cabot	,,	1	1	0

The following donations have been received:—

A. S. Adams	£1	1	0
A. Gofton, Capt. A.V.C.		10	6
E. H. Leach	1	0	0
W. W. Smart	1	1	0
A. Whicher	1	0	0
C. G. Wilkinson	2	2	0
J. Willett	1	0	0
Woodger and Broad	2	0	0

The usual payment of £3 10s. per month had been received from Mr. E. A. West, acting Treasurer for Boltons Cinema Fund. Mr. West had directed that all donations received from the Fund after 31st December, 1916, were to be used for current relief.

Cases. No. 25. It was reported that the National Veterinary Benevolent and Mutual Defence Society had decided to pay a grant of 7/6 per week in this case, and it was thereupon resolved that the Council's grant of 5/- per week be discontinued for the present. The President and Treasurer were, however, empowered to renew the grant if found necessary.

No. 26. The Hon. Treasurer reported that enquiries made in this case had been satisfactory, and that the grant of 5/- per week authorised at the previous meeting had been paid.

No. 27. The President reported that this case had been laid before him by Mr. Barrett, and that after enquiries he had decided that immediate assistance was necessary. He had, therefore, authorised the Treasurer to pay a grant of 10/- per week as from May 1st.

Mr. Sumner reported that an application had also been laid before the National Society, and that a grant of 7/6 per week had been made. It was thereupon resolved that the grant of 10/- per week be discontinued, but that in the event of the recipient applying for and obtaining an old age pension, a grant of 5/- per week be made.

No. 28. The Hon. Secretaries submitted a report on this case, together with a communication received from the Charity Organisation Society. It was thereupon resolved that no action be taken.

No. 29. An application from a widow with four children—two at work, one at school. Mr. Sumner reported that a similar application had been made to the National Society. It was resolved that a grant of 5/- per week be made for the present quarter, and that in the meantime further enquiries be made.

No. 30. Daughter of a M.R.C.V.S., aged 64. Blind in one eye. Income £60 a year. This application was carefully considered, but in view of other and more pressing demands on the Fund it was resolved that no action be taken.

Ex-officio Members. Mr. Garnett proposed, Prof. Mettam seconded, and it was resolved: That the Trustees, Hon. Secretaries, and Treasurer be ex-officio members of the Council.

Bye-laws. On the proposition of Mr. Garnett it was unanimouly resolved: That it be left to the President and Hon. Secretaries to prepare a draft of revised bye-laws, and to submit the same for consideration at a subsequent meeting of Council.

Representatives of the Fund. It was resolved: That in any revision of the bye-laws provision be made for the nomination of Representatives by each Veterinary Medical Association on the Council of the Fund.

London Orphan School. Mr. Garnett reported that he had votes at his disposal for the London Orphan School, and that if necessary he could secure altogether 10 votes.

Accounts for payment. Accounts were submitted and ordered to be paid. It was also resolved: That the usual grants be continued to present recipients.

Appeal for funds. It was resolved:

(*a*) That an appeal for funds be addressed to all members of the profession. A draft circular submitted by the Hon. Secretaries was read and approved.

(*b*) That 100 collecting boxes be procured at a cost not exceeding £5, to be supplied to members and to Veterinary Associations willing to take them; the contents to be transmitted to the Hon. Treasurer on the 1st of December in each year.

ROYAL (DICK) VETERINARY COLLEGE, EDIN

Presentation of Prizes.

The Secretary for Scotland, Mr. Robert Munro, K.C., M.P., presented the prizes to the successful students at the Royal (Dick) Veterinary College, at the College in Edinburgh, on Saturday. Professor Rankine, chairman of the Board of Governors, presided, and among those on the platform were Lord Provost Sir J. Lorne MacLeod, Mr. C. E. Price, M.P., Principal Sir Alfred Ewing, Sir Robert Wright, chairman of the Scottish Board of Agriculture; Sir Hugh Shaw Stewart, Sir James Russell, Mr. A. I. M'Callum, and Principal Bradley.

The Chairman said that the Williams Memorial Prize had been awarded to one of their graduates, Mr. George Howie. This prize was open to the graduates of all veterinary colleges in Great Britain and Ireland. Since the outbreak of the war the College had been solely concerned with the training of those who were to become officers in the Veterinary Corps. He might mention that whereas in the South African War the mortality rate among horses was 50 per cent.; in the present war it was under 10 per cent. in 1916. A total of 300 graduates and students of the College were on military service. One had received the D.S.O., five the M.C, one the D.S.M., and 24 had been mentioned in dispatches. One member of the teaching staff had been awarded the Military Cross. (Applause.)

The prizes were then presented by the Secretary for Scotland, the "M'Farlane" prize for the best student being awarded to Mr. W. S. Petrie.

Mr. Munro said that was, he thought, a notable day in the history of the institution. They were installed in their new home, and he supposed for the first time in that building the ceremony of presenting prizes on what he thought was called commemoration day was taking place. All who were concerned in bringing about the fruition of their hopes in this matter, all who had helped, not only in the inception, but in the carrying out of the enterprise which had resulted in the construction of that building, with all its splendid appointments, were of the most sincere felicitations. When he thought of the difficulties in these days in regard to labour, material, and transport, then he thought the management of that institution were to be very heartily congratulated on having triumphed over those difficulties. They had always been proud, and justly proud, in Scotland of their education, be it University, public school, secondary or elementary, and not less had they a right to be proud, he thought, of the position of veterinary science to-day. When he recalled—he was speaking on information now—that less than 100 years ago in Scotland there were no educational facilities at all, and when he recalled that within the intervening years they had sent out from the Dick College no fewer than 5000 skilled veterinary surgeons to every part of the world—of the five veterinary colleges in United Kingdom three had at their head graduates of the Dick College (applause)—and when he recalled that now two University degrees were open to them; when he found them housed in that building, then he thought he was justified in saying not less were they proud of the educational facilities in Scotland which pertained to veterinary science. And a more important subject than that science, both on the research side and on the educational side at the present day, one could not conceive. There were two subjects which were on everybody's lips and in everybody's minds at the present moment—agriculture and public health; and on both these subjects veterinary science had much to say. He had always been interested in agriculture; he always would be interested in agriculture, whether in office or out of office; and anything which he could do to further its interests would be done with the greatest possible pleasure. Veterinary science, as he understood it, took to do with infectious diseases with which agriculture had got to combat, and not only deal with the curing but with what was even more important—the prevention of those diseases. In public health they knew the services that veterinary science had rendered, and they were very grateful for them. As to military operations, to-day veterinary science had proved that it could bring about a sweeping reform, such as was testified by the figures which Professor Rankine had read. He was sure, whether they considered the bearing of their science on public health, on agriculture, or on military operations, they would find its importance is not overestimated.

That institution and the science taught there would always be associated with the name of Mr. Dick. He had been reading the history of their institution and the endowment which it provided, and it was an interesting story. He had also been reading the recent history which culminated in the construction of that great building, and he was sure they were grateful to all those bodies and persons who had helped to bring the institution to the stage at which it had reached that day. (Applause.) He was told the institution was not just clear of debt, and he was also informed that a sum of some £1700 would bring about that most desirable result. He wanted to tell them that day that he had authorised the payment of that sum from the Agriculture (Scotland) Fund (applause)—and he was quite sure that money could not be better expended. (Applause). He wished the institution well in the future. He could not express a better wish than that it might equal, and even eclipse, the prosperity which had attended it in the past. (Cheers.)

Lord Provost Sir J. Lorne MacLeod, in proposing a vote of thanks to the Secretary for Scotland, congratulated Mr. Munro on the endeavour he made to keep in touch with the thoughts and sentiments of the citizens of the North. His Lordship was not quite sure if they quite realised the great facilities which were offered in the city of Edinburgh for agricultural teaching and training. Within their area culture was carried on to an extent unequalled in any other part of the country, and it was peculiarly appropriate that in the city itself the teaching of agricultural science should hold such a prominent place. In its own particular sphere the Dick College had played a prominent part. (Applause.)

Principal Sir Alfred Ewing proposed a vote of thanks to the donors of prizes, and referred to the link that bound the College to the University. He said he felt sure, after seeing their fine College, that if the time should ever come when they became affiliated to the University, the University would have no reason to be ashamed of its new daughter. (Applause.)

Mr. C. E. Price, M.P., in proposing a vote of thanks to the Chairman, took occasion to express gratitude to the Secretary for Scotland for intimating that he was to free the institution of its debt. (Applause.) The College, when it was completed, would be the best veterinary institution in the United Kingdom. They hoped in a very short time to see the College properly equipped. (Applause.) In closing, Mr. Price referred to the services rendered to the College by Mr. M'Callum, and said no man had done so much for veterinary science as Mr. M'Callum had done since Mr. Dick's death.

Mr. M'Callum afterwards addressed the students on "The Career of a Veterinary Surgeon in Edinburgh from 1865 to 1917."—*The Scotsman.*

Awards.

Junior Anatomy.—Silver Medal: R. Dunwoody; Bronze Medal: W. A. R. Ogilvie.

Biology.—Silver: W. A. R. Ogilvie; Bronze: T. J. Richardson; Book Prize: A. K. Cameron.

Chemistry.—Silver: W. A. R. Ogilvie; Bronze: A. M. Graham.
Practical Chemistry.—Bronze: A. M. Graham.
Senior Anatomy.—Sir John Gilmour Medal: J. Davies; Silver: W. C. Miller; Bronze: J. Davies.
Physiology.—Silver: J. Davies; Bronze: G. B. Purvis.
Stable Management.—Silver: W. C. Miller; Bronze: J. Davies.
Pathology.—Sir John Gilmour Medal: J. McAllan, M.A.; Silver: J. McAllan, M.A.; Bronze: J. R. Rider.
Hygiene.—Silver: J. McAllan, M.A.; Bronze: J. R. Rider.
Materia Medica.—Silver: J. McAllan, M.A.; Bronze: J. R. Rider.
Bacteriology.—William Scott Silver Medal: J. McAllan, M.A.; William Scott Bronze: J. Rider.
Surgery.—Silver: W. S. Petrie; Bronze: D. G. Wishart.
Medicine.—Silver: W. S. Petrie; Bronze: D. G. Wishart.
Obstetrics.—Silver: W. S. Petrie; Bronze: T. Grahame.
Clinique.—Silver: F. Christopher; Bronze Medals: W. S. Petrie and T. Grahame.
Parasitology.—Bronze: T. Grahame.

McFarlane Medal: W. S. Petrie.

£21 Prize: W. S. Petrie.

GLASGOW VETERINARY COLLEGE, INCORPORATED.

A meeting of the Board of Governors was held in Glasgow on Wednesday, the 27th ult. Sir Hugh Shaw Stewart, Bart., C.B., in the chair. The necessity for investigation into braxy, louping-ill, and other sheep diseases which has been repeatedly urged by the governors for several years past, was again considered, and it was reported that, as a result of the steps taken, it was probable that something definite might be done at an early date.—*North British Agriculturalist.*

REPORT OF THE CEYLON GOVERNMENT VETERINARY SURGEON FOR 1916, BY G. W. STURGESS, M.R.C.V.S. [Abridged].

The Staff included:—Four Assistant Veterinary Surgeons: Colombo—Mr. E. T. Hoole, G.B.V.C.; Nuwara Eliya—Mr. M. D. S. A. Wijayanayaka, G.B.V.C.; Kandy—Mr. G. B. de Silva, G.B.V.C.; Ratnapura—Mr. V. A. Hoole, G.B.V.C.

Manager, Government Dairy—Mr. P. C. J. Fernando; Assistant Manager, Ambepussa Farm—Mr. R. F. P. Jayawardana (acting); Laboratory Assistant—Mr. E. Duffey; and thirteen Stock Inspectors: (one of these, Mr. J. I. Apponso, at Bombay Veterinary College).

INFECTIVE DISEASES.

Cattle: Rinderpest. The decrease in the number of outbreaks continued throughout 1916. Three Provinces were free during the year. In six Provinces the total number of cases for the year was 856, against 1493 last year. Two Provinces remained infected at the close of the year.

Foot-and-mouth disease. Outbreaks occurred in six Provinces. There was a marked decrease compared with 1915. The total number of cases, including Colombo town and Quarantine Station, was 284 (recoveries 280, deaths four), against 2366 cases last year.

Surra. Four cases were detected during August in Uva, two died naturally, and two were shot.

Anthrax. In three Provinces there were twenty cases: 20 deaths. This disease is extremely prevalent amongst goats and sheep imported from India. Out of 76,820 of these animals Imported to the Quarantine Station, Colombo, 1196 died from anthrax—practically 1½ per cent.

Infectious ophthalmia. An outbreak of this disease occurred amongst cattle in the Eastern Province, 4½ miles from Trincomalee, in May; 64 cases occurred, and all recovered under treatment. The outbreak ended in July.

Swine. The outbreak of swine septicæmia recorded last year extended into 1916. It ended in July. Total cases: 274, against 2512 last year. A possible carrier of the disease is *Ctenocephalus canis*, which was found infesting sick pigs.

Legislation. Proclamation of October 27, 1916, orders that no dog shall be imported from India without a license in writing under the hand of the Colonial Secretary, and repeals Proclamation of July 30, 1910, which prohibited the importation of dogs from India.

The total number of cattle for the whole Island is 1,637,020, and the number of deaths from all causes is 15,628, giving a percentage of ·954. In the year under review there is an increase of 81,786 cattle.

Inoculation with Anti-rinnerpest serum. Cattle inoculated in 1916, 223: Remained free, 138: Became ill within a month, 85: Recoveries, 38: Deaths, 47.

Horses, Cattle, Sheep, and Goats imported during 1916.

Horses, 265; Cattle, 9200; Sheep, 11,955; Goats, 64,865.

Compared with 1915, an increase of 206 horses, decrease of 1368 cattle, and an increase of 6927 goats and sheep is shown.

Quarantine.

The Municipal Veterinary Surgeon kindly furnishes the following information:—

Colombo Quarantine Station—Admitted during 1916:

Buffaloes, slaughter	800	Cattle, slaughter	3,808
„ milking	1,112	„ work	1,345
Sheep and goats	85,354	„ milking	462

Tuticorin Quarantine Depot.

The Veterinary Officer in charge reports:

The depot was worked Veterinary Assistant T. S. Alagappa Pillay till the forenoon of February 16, 1916, when Veterinary Inspector A. Rajappa took charge of the depot and continued to work till the end of the year.

The number of cattle passed for shipment during the year under report was 8731 (including calves), and that of sheep and goats 76,077, as against 9332 and 70,921 respectively during the previous year.

Foot-and-mouth disease prevailed in the depot from the end of March to the middle of June, during which time 18 affected cattle were detected, against 83 during last year. There was no mortality.

Anthrax prevailed throughout the year under review, bnt was most marked in March and April. Eight deaths occurred among cattle and 18 among sheep and goats, making a total of 26, against 13 during the previous year. No other contagious disease occurred during the year.

The mortality under the head of non-contagious diseases was 16 among cattle, and one among sheep and goats. Most of these cases were due to the unwholesome water supplied for the animals at Tattaparai. A few cases of diarrhœa also occurred at the depot.

General remarks. The depot that was removed to Tattaparai in January, 1915, as a temporary measure, had to remain there during the year 1916 also, for want of a suitable site at or near Tuticorin. Considering the many hardships experienced by both the dealers and their animals at Tattaparai by way of bad water, want of any material shelter, disappointment in shipments owing to irregular steamer services, and late or insufficient supply of railway trucks, the Madras Government

finally decided to transfer the depot to Tuticorin, though at some disadvantage.

Considering the responsible nature of quarantine work, the appointment of an officer of an Inspector's rank was sanctioned by the Madras Government, with effect from February 16, 1916

Remarks of the Superintendent, Civil Veterinary Department, Madras, who supervises the station:—

As all the non-perishable goods traffic between Tattaparai and Tuticorin has been postponed since January, 1917, by the South Indian Railway Company until further orders, it was found impossible to remain at Tattaparai. The depot has, therefore, been transferred to Tuticorin with the approval of the Local Government. No permanent arrangements have been made at Tuticorin, as it has been decided by the Ceylon Government to give up quarantining on this side, and as we have been asked not to incur any further expendiditure at Tuticorn.

Kayts Quarantine Station, Northern Province.

Cattle landed, 656. All remained free from disease during the period of quarantine.

RABIES.

Cases examined at the Bacteriological Institute, 23. Positive, 4.

The Director of the Bacteriological Institute at Colombo, and the Director of the Pasteur Institute, Coonoor, kindly furnished the above information.

It is unsatisfactory to observe that the number of people who went to Coonoor for treatment, 139, shows an increase of 67 compared with 1915.

The Municipal Veterinary Surgeon, Colombo, informs me that the number of suspected cases of rabies in Municipal limits was 22. Generally it is only in those cases where people are bitten that specimens are sent to the Institute for examination.

MISCELLANEOUS.

The horses of His Excellency the Governor's Escort, the Police horses, the draught bulls of the Public Works Department, Convict Establishment, Botanic Gardens, and Government Dairy cattle have been treated when necessary.

Horses for insurance under the Volunteer Horse Insurance Scheme have been inspected as required.

The following have been kindly identified by the Government Entomologist during the year:—

Flies.—Tobanus striatus (Fb.), Kandy District, in April.

Pycnosoma flaviceps (Mag.), the cause of Myiasis in dog's mouth, Colombo, November.

Ticks.—Boophilus australis (Fuller), Experiment Station, Peradeniya.

Arsenical poisoning in cattle. In May, ten cattle were accidentally poisoned in Uva, owing to licking the earth floor of a veraudah which had been treated with a preservative solntion, containing arsenic, to destroy white ants. The saline matter in the preparation enticed the cattle to lick the floor.

Cattle poisoning by artificial manure. In October, a cart bull was poisoned in Kandy District, owing to eating artificial mannre which was found to contain calcium cyanamide.

Castration. In April, the Stock Inspector, Northern Province, went to Delft and trained a man to castrate cattle.

GOVERNMENT DAIRY, MODEL FARM AND BRANCH FARM AT AMBEPUSSA.

Government Dairy. Manager: Mr. P. C. J. Fernando. No outbreaks of infections disease occurred during the year. Losses were due in most instances to parasitic gastritis *(Hæmonchus contortus)*.

Eleven cows were purchased during the year at a cost of Rs. 2250.50. Proceeds of the sales of stock were Rs. 3780.93. Twenty-four heifers were sent to the branch farm at Ambepussa to grow up. At a moderate estimate of Rs. 50 each at a saleable age, these would have fetched an additional sum of Rs. 1200. The total working expenses were Rs. 45351.53, and the total receipts were Rs. 49309.27½, giving a balance of Rs. 3957.74½.

The total output of milk for the year was 27685 gallons, against 25596 gallons last year, the greater portion of which is supplied free to Government hospitals in Colombo.

The Live Stock balance in hand in December, 1916, was: Cows, 109; Calves, 100; Stud bulls, 7; Draught bulls, 6

Branch Farm, Ambepussa. Manager: Mr. R. F. P. Jawawardana, Stock Inspector (acting). This farm is used for the purpose of growing young stock to come into the dairy in due course.

Live Stock balance in hand, December, 1916: 42 Heifers; 1 bull

Model Farm. Manager: Mr. C. T. Perera until November, when he was transferred to Matara, and Mr. G. S. P. Dahanayaka took his place.

Statements of receipts and expenditure, and live stock return for 1916 are annexed.

Total receipts, Rs. 1660.85; expenditure, Rs. 736.14; balance, 924.71.

Live Stock balance in hand, December, 1916: Rams and ewes, 32; Lambs, 15.

In conclusion, I may mention that apart from outbreaks of disease, which naturally give a good deal of trouble, the Assistant Veterinary Surgeons and Stock Inspectors carry out a great deal of unobtrusive work in keeping the main lines of transport, galas, etc., under supervision and, as far as possible, clear of disease, which entails a good deal of hard travelling. The Dairy Manager's duties entail constant attention, and in such a large establishment there is ordinarily a good deal of worry. To the entire staff I desire to express appreciation of efficient work throughout the year.

G. W. STURGESS, M.R.C.V.S.,
Government Vety. Surgeon.

Colombo,
Feb. 26, 1917.

The A.V.C. Comforts Fund.

Dear Sir,—I will be grateful if you will find space in this week's issue of *The Veterinary Record* for the accompanying lists of subscriptions and parcels received on behalf of the A.V.C. Comforts Fund. I regret there has been so long an interval since sending in my previous acknowledgements, but owing to illness this has been unavoidable.—Yours truly,

ADELAIDE M. MOORE.

20 Parsifal Road, Hampstead, N.W. 6.
July 17th.

Subscriptions received since list published June 1.

per Maj. J. A. Dixon: E.A.D. Veterinary Hospital, Huntingdon	£20	0	0
Mrs. Jackson, Errol		10	6
Mrs. E. R. C. Butler	5	0	0
Mrs. Alison Brown, Invergordon	1	0	0
per " " " Mrs Grant		6	0
per Mrs. Mettam	8	4	0
Mrs. J. O. Andrews	1	1	0
per Mrs. Baird: from Mrs. Bell, Edinburgh	3	0	0
per Maj. H. E. Gibbs: contribution from No. 8 Veterinary Hospital, B.E.F.	5	0	0

Lt.-Col. A. Olver	2	2	0
per Mrs. Hunt, Mallow	6	10	6
per Mrs. Rutherford: further addition from J. Ewing Johnston, Esq.—proceeds of Matinée, Belfast	3	4	7
Mrs. Mackenzie, Penicuik	1	0	0
Maj.-Gen. F. Smith, C.B.	1	10	0
per Capt. W. Lenton: subscribed by No. 47 Mobile Veterinary Section, B.E.F.	1	5	0
Capt. H. V. Fenn, A.V.C., R.N.D.	1	1	0
Capt. F. H. Wright, A.V.C.	2	2	0
Mrs. H. B. M. Mackenzie, St. Albans	5	0	0

Parcels of Woollen Comforts received from:

Mrs. Rutherford, Mrs. Cowan, Mrs. Mcgregor, Mrs. Fearnside, Mrs. Burke Savage, Mrs. Mackenzie, Mrs. Kirby; and from Mrs. John Perry, welcome contribution of playing cards.

R.C.V.S. EXAMS: GLASGOW V. COLL.

The following passed their Final Examination:

Mr. G. L. Bradley | Mr. F. McD. McKenzie

The following passed his Third Examination:

Mr. A. L. Robertson

The following passed his Second Examination:

Mr. J. H. Mason

ARMY VETERINARY SERVICE

War Office, July 14.

The following are among the Decorations awarded for distinguished services rendered during the campaign. The King has given unrestricted permission in all cases to wear the Decorations and Medals in question:—

PRESENTED BY THE PRESIDENT OF THE FRENCH REPUBLIC.

LEGION D'HONNEUR.—CROIX D'OFFICIER.

* * * *

Col. (temp. Brig.-Gen.) J. Moore, C.B., F.R.C.V.S.

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, July 14.

REGULAR FORCES. ARMY VETERINARY CORPS.

Capts. to be actg. Majors whilst Asst. Dirs. of Vety. Servs. of a Div.:—R. H. C. Higgins (May 13, 1916); E. McK. Nicholl (from May 14 to Dec. 2, 1916); P. V. Beatty (Oct. 1, 1916); E. G. Turner (Dec. 23, 1916); E. McK. Nicholl (May 4).

To be temp. Lieuts:—G. J. O'Brien (June 10); H. H. Lefebvre (June 17).

July 17.

Temp. Capt. to be actg. Maj.:—F. Chambers (June 11).

Temp. Lts. to be temp. Capts.:—L. J. Kelly (June 14); T. J. Kenny (June 19); J. J. Bourke (June 25).

July 18.

Temp. Lieut. to be temp. Capt.:—T. Dalling (July 3).

July 19.

Maj. P. J. Harris relinquishes the rank of temp. Col. and reverts to the actg. rank of Col. whilst empld. as an A.D.V.S. (June 6).

Capt. (Bt. Maj.) S. Black relinquishes the actg. rank of Maj. on ceasing to be empld. as an A.D.V.S. (Feb. 9).

Capt. G. Lloyd, Spec. Res., to be actg. Maj. whilst empld. as an A.D.V.S. (Feb. 9).

TERRITORIAL FORCE, ARMY VETERINARY CORPS.

July 14.

Capt. C. E. Norgate relinquishes his commn. on account of ill-health, and is granted the hon. rank of Capt. (July 15).

The following casualties are reported:—

DIED OF WOUNDS—Capt. A. Hoskin, attchd. R.G.A.

DIED—Pte. H. T. Reid, 17461 (Reading).
Pte. F. West, E/4413 (Derby).

Personal.

On July 16th, 1917, Prof. and Mrs. METTAM were presented by the Members of the Staff of the Royal Veterinary College of Ireland with a piece of silver, in commemoration of their Silver Wedding. Prof. O'Connor, as Senior Member of the Staff, made the presentation.

OBITUARY.

FRANK A. HOLMES, M.R.C.V.S., Hemswell, Lincoln.
Graduated, Lond: April, 1877

Mr. Holmes died on 13th June, of heart failure.

Dr. Oswaldo Cruz.

Dr. Oswaldo Cruz, who recently died at Rio de Janeiro, at the age of 46, was one of the foremost hygienists and bacteriologists of Brazil. As Director of Public Health he laboured with absolute singleness of purpose and utter disregard of political influences for the improvement of the sanitation of Rio de Janeiro. So drastic were his reforms that he once almost caused a revolution against the Government. He rigorously isolated all cases of infectious disease, and insisted on the thorough disinfection of the excretions of patients and of their dwellings. He pulled down unhealthy houses on so extensive a scale that whole quarters of the city were wiped out. He organised campaigns against mosquitos, and was untiring in devising measures for the safeguarding of human life. In this way he succeeded in three years in freeing the capital from yellow fever and plague. In 1908 he began a war against malaria and small-pox in Rio, which he carried on with great success. After much opposition he gained the confidence of his fellow countrymen to such a degree that he was accepted almost as a hygienic dictator throughout Brazil, to all parts of which he was called on the outbreak of epidemics. In 1900 he founded an Institute of bacteriology and serum-therapy in Rio de Janeiro, to which in 1908 the grateful citizens gave his name. Thanks to the energy of Cruz and the enlightened liberality of the Brazilian Government, it has grown into one of the finest institutes of parasitology in the world. There Caria Chagas discovered the cause of chronic infective thyroiditis, and much other valuable research work has been done. The proceedings of the institute are issued in a beautifully illustrated volume; it was formerly published in Portuguese and German, but since Germany has put herself outside the pale of civilization French has been substituted for the latter language.

[The *Memorias do Instituto* often contains much of interest concerning animal diseases, parasites, biting flies of the country, etc.]

Sheep Scab—difficulties of dipping.

The following excerpts are from a further letter from "Strathspey Shepherd" in *The Scottish Farmer*;* and set out more fully his views on the times of dipping in the hill districts. The present increase in scab is greater in England than in Scotland, but it is an enemy to be attacked wherever it is found.

"Let us take a hirsel carrying 1000 ewes. When gathered for clipping the sheep farmer and shepherds find that a hundred or so of the lot are missing. Those in hand are clipped and dipped, and the lambs would require to be done to make the best of it, and also again on being taken from their mothers about mid-August. The ewes and lambs being dipped, they are then allowed access to their hirsel, and, despite the attention given by the now depleted staffs of shepherds, many of the missing lot get mixed up with the dipped ones, as well as neighbouring flocks that might not be dipped for two or three weeks later. With the small amount of dip the sheep could then carry, dipping at this time is of very little value for hill stocks. The majority of the number missing at clipping time are most likely spread throughout the deer forests, and at this time both shooting tenant and gamekeepers generally refuse access to shepherds. Even after a gathering is done there is still some to account for which may be on the hills till December. I experienced this last year. The last ones brought in are treated, but the majority entirely miss the summer dipping. After wintering and lambing are past the sheep are put to the same grazing, and where sheep are for one summer, their desire is to get to the same quarters again, the deer forests—causing a repetition of the previous year and the missing of the summer dipping."

"I quite agree that scab outbreaks are most common in the months of September, October, November, and December. He maintains therefore that scab must be caught or prevented before February. I have already pointed out that I agree with the second period now laid down from 1st September to 15th November, though it might be thought that September is rather early to start away with for any class but lambs. What is re-required badly is a dipping to catch and arrest the outbreaks of scab before the summer months. I therefore still recommend a spring dipping."

* *V. R.*, May 26, p. 500.

Rabbits and Bovine Tuberculosis.

The Cumberland War Agricultural Committee are taking steps to lessen the number of rabbits, which in some districts, owing to the lack of trappers, have become a plague. In addition to doing a vast amount of damage to crop and timber, many Cumberland farmers hold that rabbits spread tuberculosis among cattle. The theory is that where rabbits are numerous they burrow and live close together, deplete the food supply in winter, develop tuberculosis and eject infective matter on the grass, which is swallowed by the cattle, which if they happen to be in low condition, or have a hereditary tendency towards the disease, develop it in their turn. Where the rabbits are in large colonies, it is also held by some farmers that their droppings, owing to its strong nature, is harmful rather than beneficial to the herbage and to the stock grazing on it. Indeed agricultural opinion in Cumberland is coming round to the view that the rabbit ought to be totally exterminated on all good land and in plantations, and left to provide sport only on cheap hill grazings, and bracken and furze-covered waste.—*North British Agriculturist.*

Prussic Acid.

Prussic acid, or, as it used to be called, Prussian acid, owes its name to the fact that it was first obtained from Prussian blue. This was by Scheele, in 1782. Prussian blue itself was first produced in 1704, by a fluke, and it is curious that neither did its author suspect its value, nor Scheele, apparently, the poisonous property of its acid—there is, at least, no hint of this in the account of his discovery in his "Essays," as condensed by Nicholson in 1790. The Paris Codex was, I believe, the first Pharmacopœia to include the acid, the formula adopted for its preparation being that of Gay-Lussac, which consisted of treating bicyanide of mercury with hydrochloric acid. The P.L. of 1836 included Prussian blue (ferri percyanidum), potassii ferrocyanidum (the official source of the acid), and the acid itself in the form and under the name of Acidum Hydrocyanicum Dilutum. Its use as a weapon of war will be a reversion to savagery, the poison shell taking the place of the poisoned dart.—*The Chemist and Druggist.*

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended July 14		7	7					31	48		55	19
Corresponding week in	1916 ...	8	8			1	5	30	53		85	65
	1915 ...	6	11			2	3	30	74		96	317
	1914 ...	11	11					29	37		75	1006
Total for 28 weeks, 1917		306	348			16	28	1664	3299	388	1508	647
Corresponding period in	1916 ...	332	392	1	24	31	83	1536	3548	178	2808	8261
	1915 ...	374	423			29	47	479	1034	157	2555	11488
	1914 ...	461	491	11	74	59	156	1427	2516	147	2342	24644

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities.

† Counties affected, animals attacked :—

Board of Agriculture and Fisheries, July 17, 1917.

Excluding outbreaks in army horses.